

Building a Legacy of Active Living Communities.

**ACHIEVE
Action
Institute**

**Denver, CO
July 2009**



**“We few, we happy few, we band
of brothers” and sisters . . .**

Topics for consideration:

- A musical reference.
- Some **perspective** . . .
- The “**epidemics**” too few are talking about (and a brief rant).
- A question of **priorities**, and five recommendations.
- The **stickiness** problem and **environmental level** solutions.
- What **you** can do to help.
- Why it **really** matters!



Alexandria, VA

**“If I leave here tomorrow, will
you still remember me . . . ?”**

Free Bird, Lynnyrd Skynnyrd

Some perspective and a thought exercise:

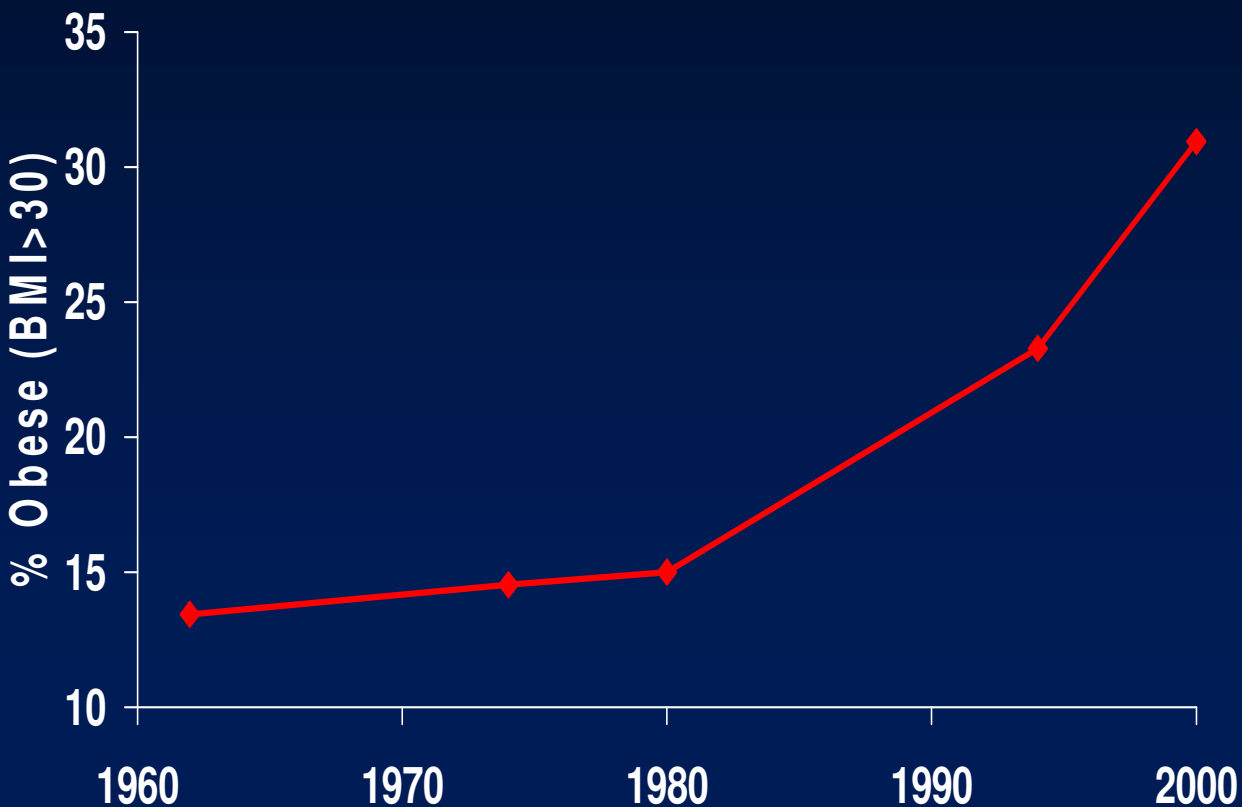
- Recall one of your earliest *fond* memories of physical activity from your youth.
- For just a moment pair up and share your recollections.



America's looming chronic disease apocalypse . . .

US "Obesity Epidemic"

Ogden et. al. (JAMA 288, 14; Oct. 2002)

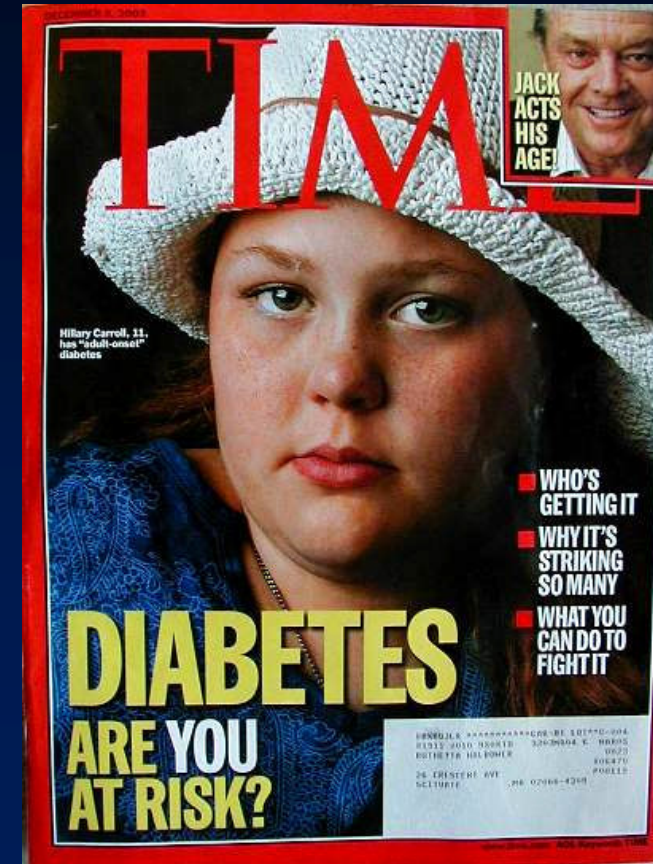


Diabetes Prevention Program

(DPP; New.Eng.J.Med., April 2002)

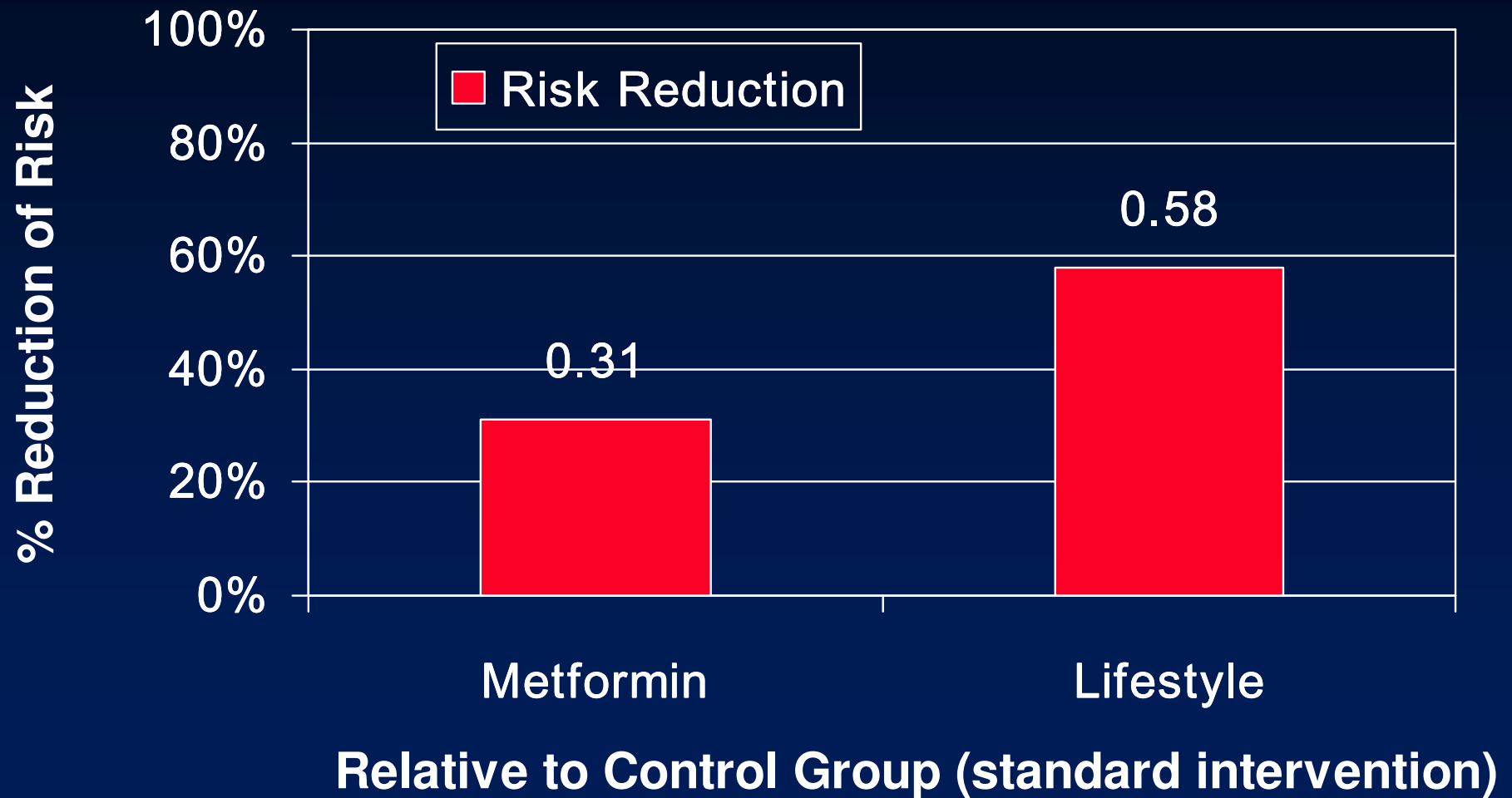
Compared three treatments for nationwide cohort (3,000+) at risk for developing diabetes (elevated fasting glucose).

1. Control: Standard exercise and nutrition counseling; placebo.
2. Standard plus drug treatment: Metformin
3. Intensive lifestyle change: Nutritional training, 150 min./week physical activity.



Diabetes Risk Reduction

(Diabetes Prevention Program; NEJM, April 2002)



My Rant:

Change the conversation. It's
not just an obesity epidemic.
It's an epidemic of **physical
inactivity** and **poor nutrition**.

Rank the priority of these five activities:

- 1. America on the Move – national meeting.**
- 2. Local planning board meeting; re: trail.**
- 3. Belmont Health Fair – lead walks, etc.**
- 4. Address Governor's task force on the MA Highway Design Manual.**
- 5. Nordic Walking (w/poles) fitness DVD.**

Health Fair:



**But how much, and what activity to
recommend to average people?**

Surgeon General's Report 1996

Physical Activity Guidelines 2008

www.health.gov/paguidelines

- **150 minutes/week** of moderate **physical activity**; more is better.
- Any activity is better than none.
- Can be **broken up**.
- **300 min/week** for children.
- Reduced risk for CVD, diabetes, osteoporosis, obesity, dementia in old age, clinical depression, a growing list of cancers.



Getting some exercise, or just getting somewhere?



Exercise or transportation?

mark.fenton@verizon.net

But, Health Fair is #5 because:

- Only reaches those who *choose* to show up!
- And only a fraction of those may actually use the information.



TN Public Health Assoc. meeting

Recommendation 1:

Think about scale & effectiveness. Ask the simple question: in **how many people is this likely to actually change behavior?**

Nordic Walking benefits:

- 20% - 40% boost in energy expenditure.
- Increased upper body workout (arms, chest shoulders, back, abs).
- Improved balance; reduced loads on feet, legs.

www.keenfit.com

www.nordicwalker.com

mark.fenton@verizon.net



BUT: Nordic Walking?
Another **fitness fad?** What
about the “dork factor?” Or
the **stickiness problem?**





**My admittedly
unique
perspective . . .**

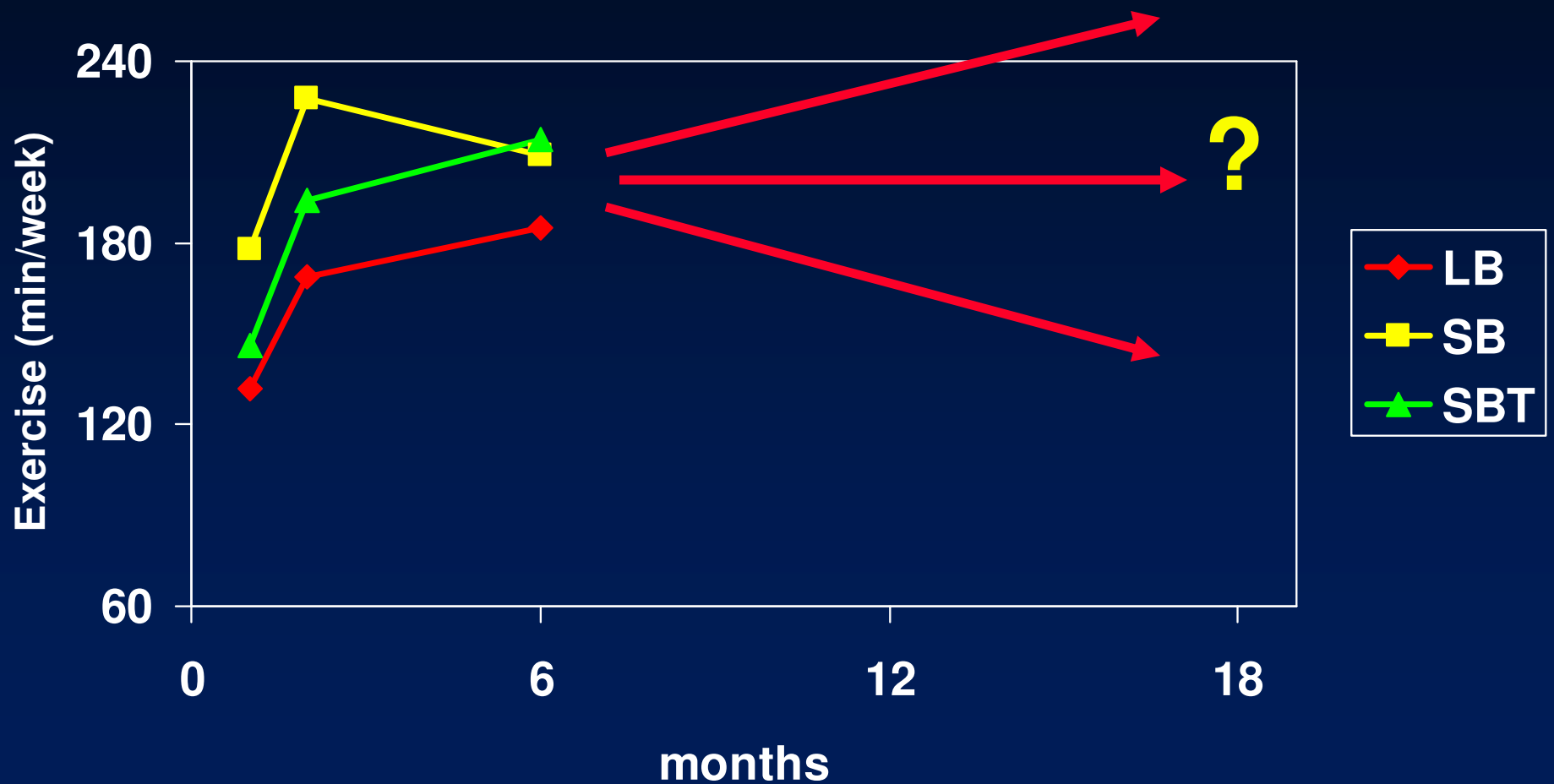
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Exercise Participation

Effect of Short Bouts, Home Treadmills

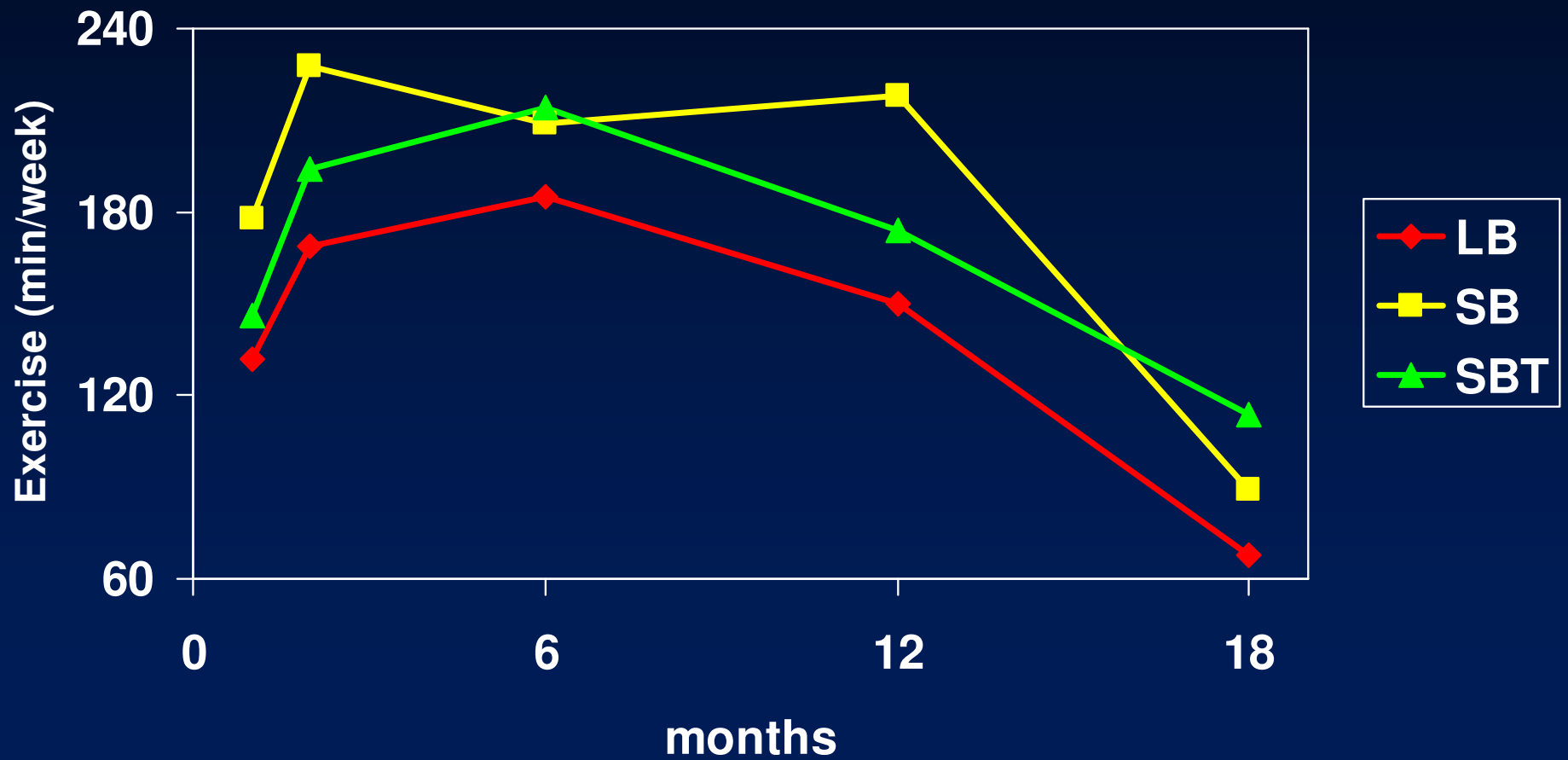
(Jakicic et.al., JAMA 282, 16)



Exercise Participation

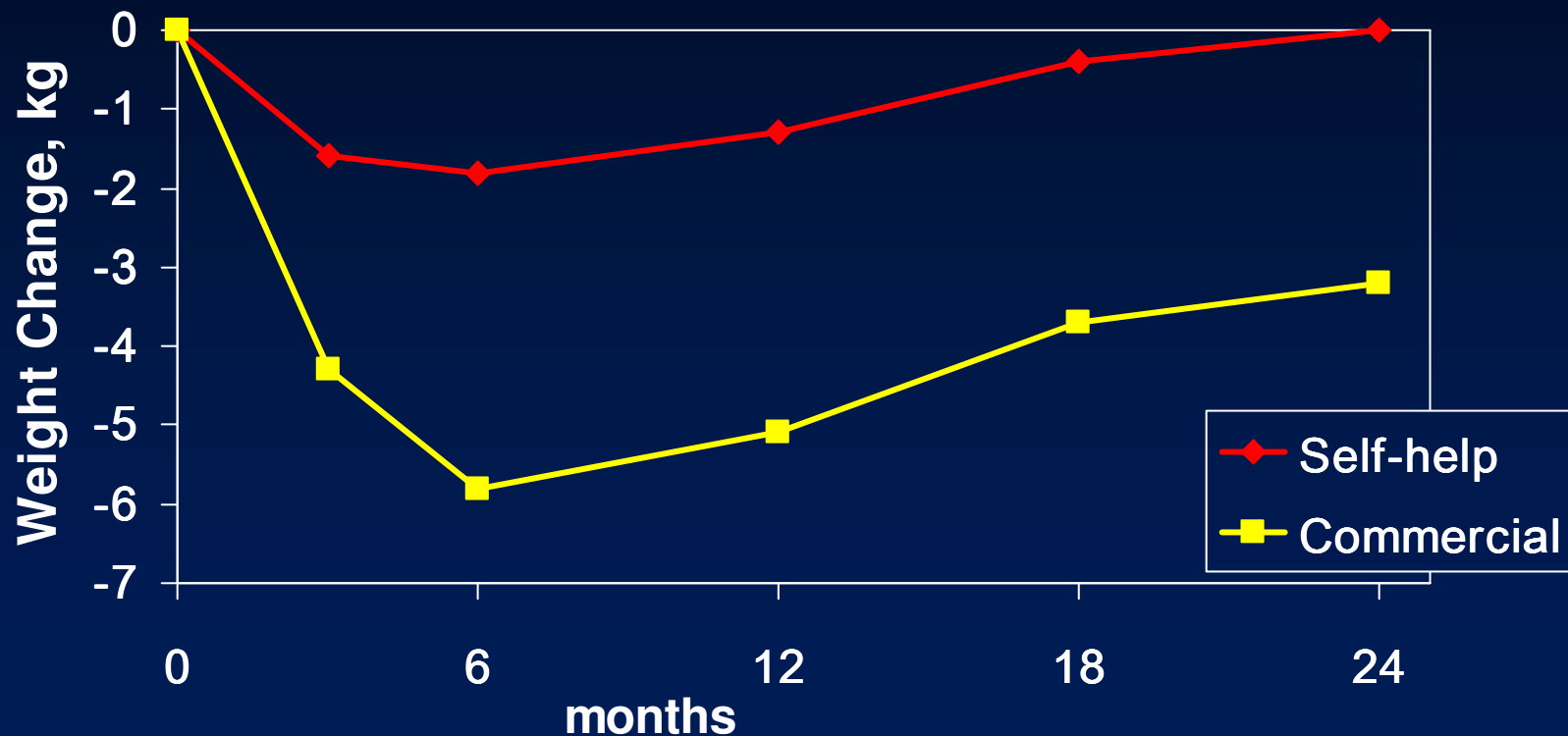
Effect of Short Bouts, Home Treadmills

(Jakicic et.al., JAMA 282, 16)



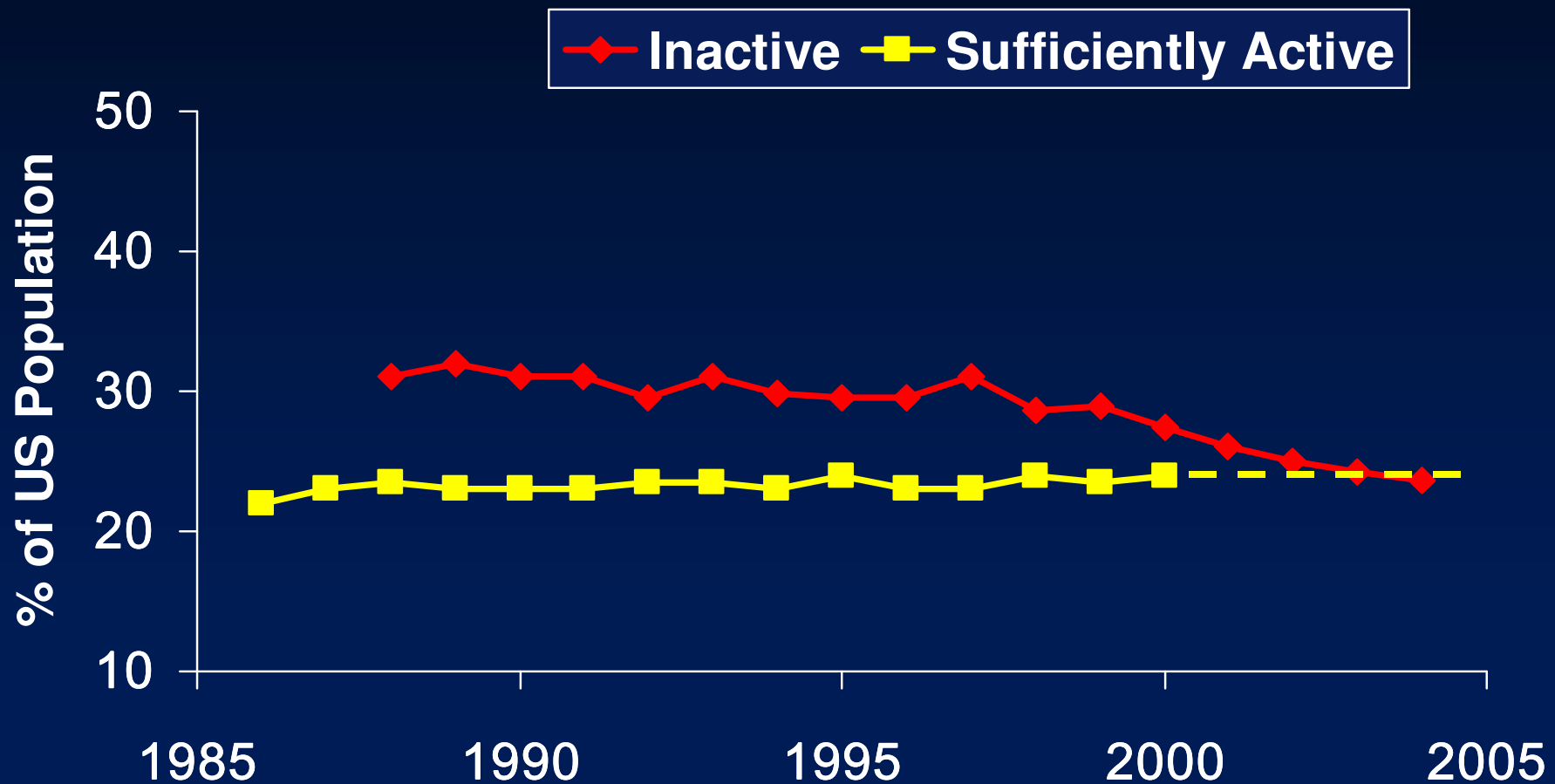
Self-help vs. Commercial Weight Loss Programs

(Heshka et.al., JAMA 289, 14; April 9, 2003)



Leisure Time Physical Activity in the US

(MMWR: 50(09), 166-9; 54(39), 991-4]

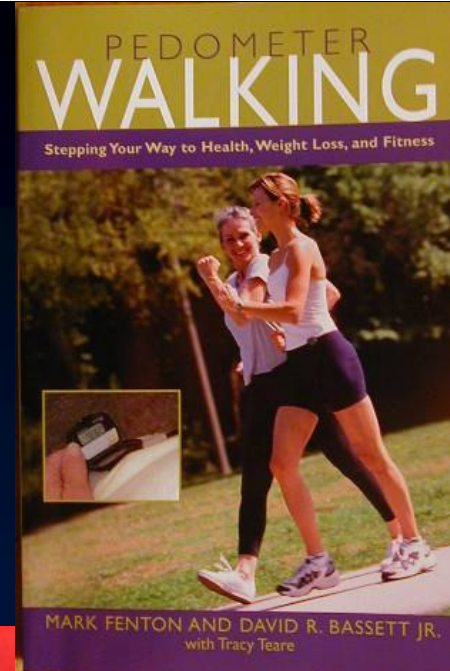


Recommendation 2:

Go for breadth—not just “exercise” for the actively inclined. We need increases in routine, daily physical activity for everyone.

Pedometer-based “lifestyle” activity promotion:

- Measure steps all day.
 - Determine your average daily steps.
 - Increase by only 10%-20% a week.
 - Keep gradually increasing . . .



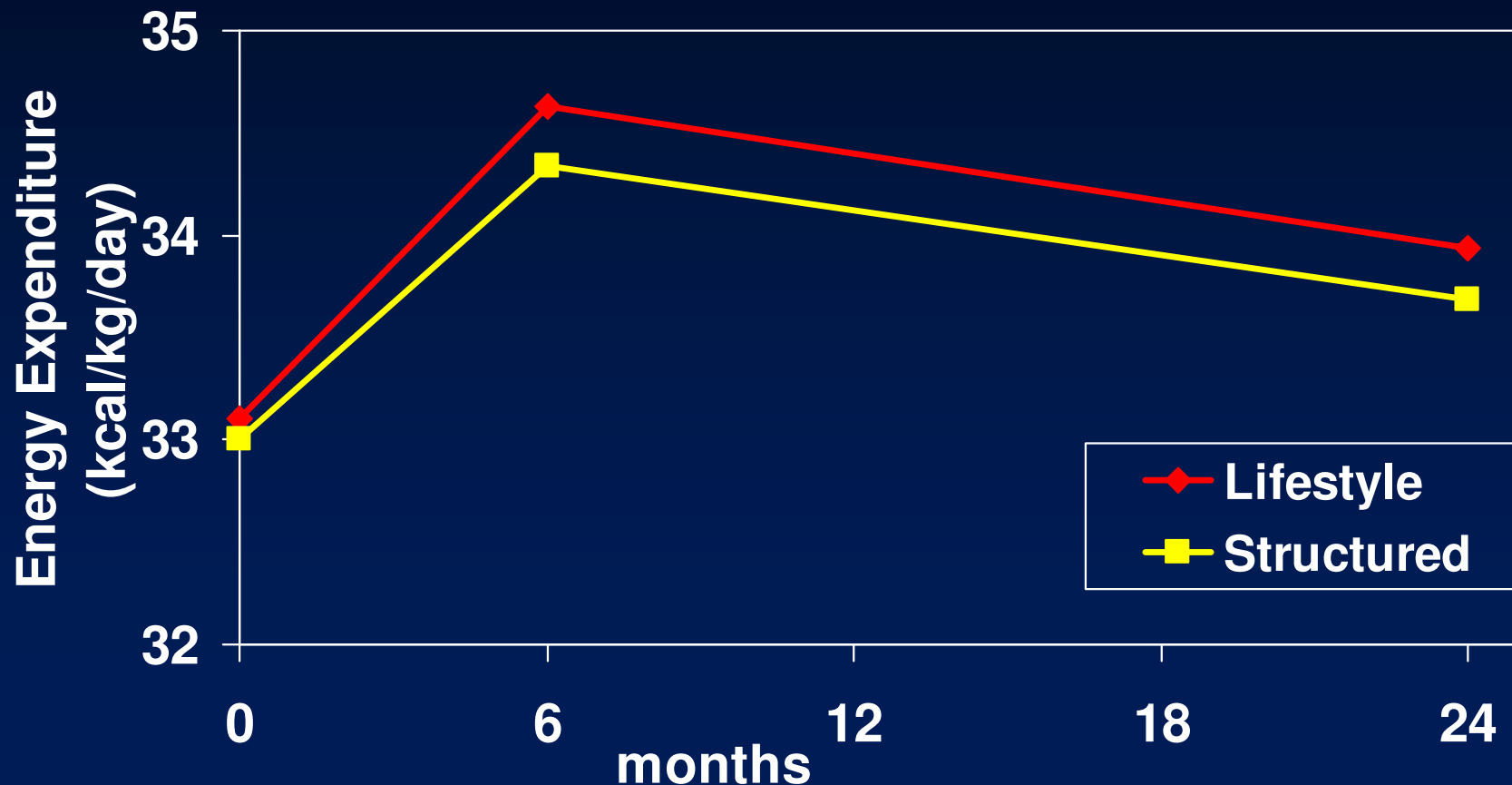
Key to Success: Keep a record!



**BUT . . .
how has
advising
people to
“take the
stairs”
worked?**

Energy Expenditure Lifestyle vs. Structured Activity

(Dunn et.al., JAMA 281, 4)



An approach to increasing daily physical activity . . .

P.A.P.P.I. (?)



Physical **A**ctivity **P**romotion through **P**redator **I**ntroduction

Social Ecology Model

Determinants of behavior change

Sallis, Owen, “Physical Activity and Behavioral Medicine.”

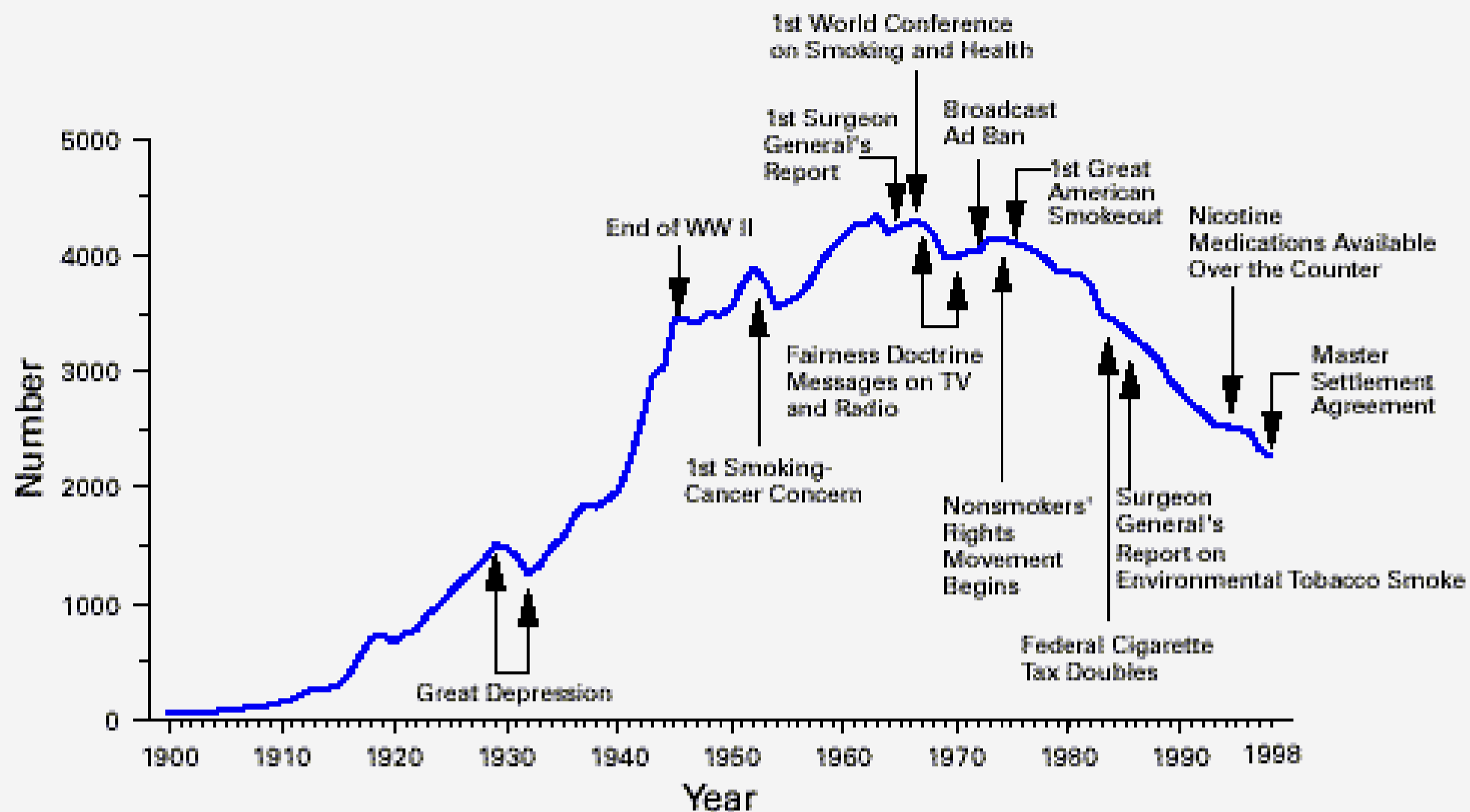
- Individual (readiness, efficacy)
- Interpersonal (family, friends)
- Institutional (school, work, HMO)
- Community (networks, local gov't)
- Public Policy (transport, land use)



Socio-ecological success: tobacco

- **Individual – education, medication**
- **Interpersonal – 2nd hand smoke, kids**
- **Institutional – work place bans**
- **Community – smoke free policies**
- **Public Policy – taxes, enforcement, advertising bans, SG's warning label.**

FIGURE 1. Annual adult per capita cigarette consumption and major smoking and health events — United States, 1900–1998



Sources: United States Department of Agriculture; 1986 Surgeon General's Report.



VS.



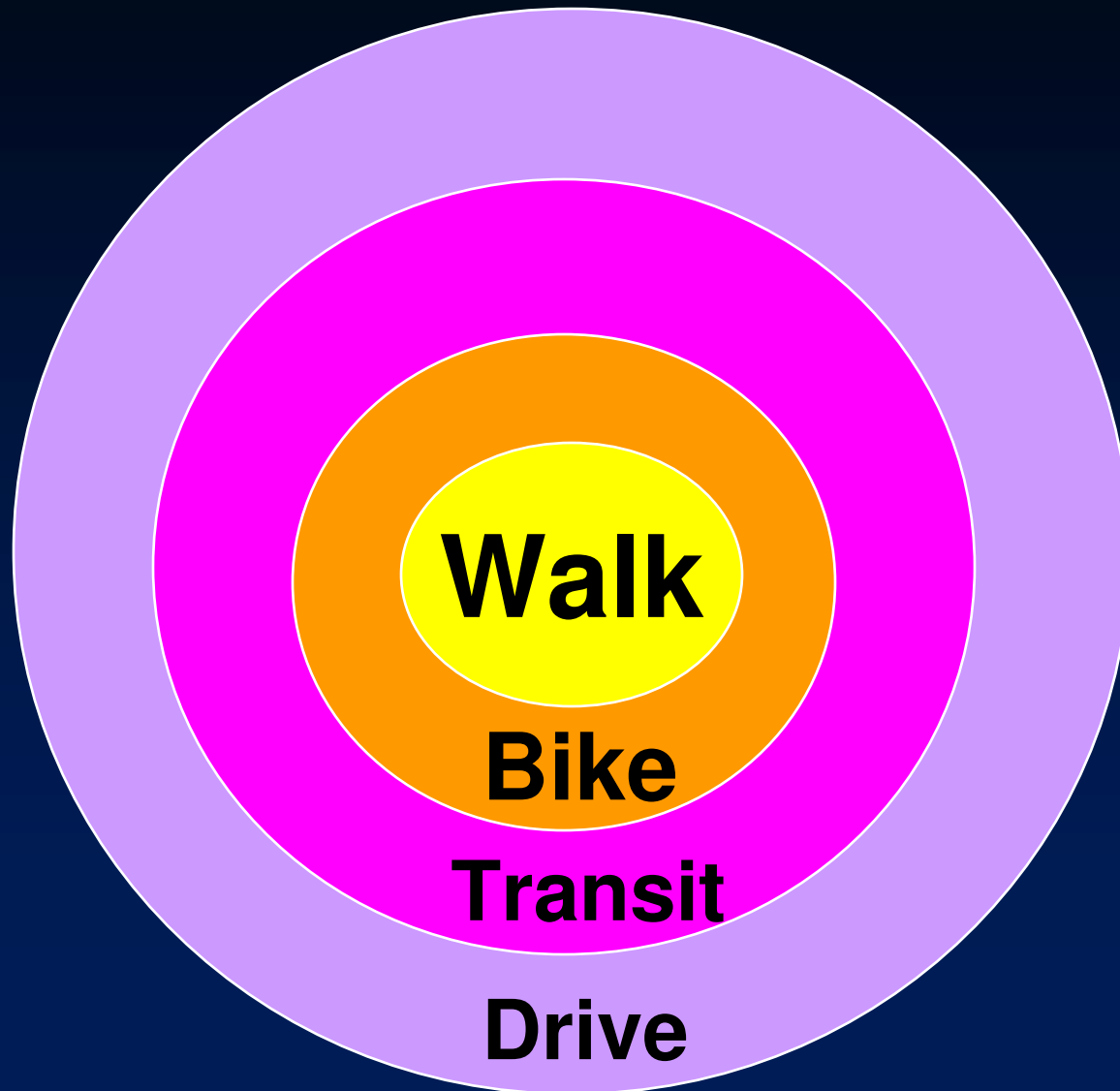
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Hawaii Dept. of Health, Honolulu

- Prompt signs.
- Clean and paint stairwells.
- Put up art, employee photos, change often.
- Pipe in music, employees rotate making selection.
- Typical : **3%-10% increase** in stair use.

The “healthy” trip decision hierarchy*:



***Nearly 25% of all trips are one mile or less; roughly 40% are two miles or less!**
(Nat'l Household Transportation Survey)

Recommendation 3:

**We have to make active living
the easier choice - actually
safer, more convenient, less
costly, and more fun than
being sedentary.**

Planning Board:

Directly impacts local
environmental factors.



The “Toxic” Environment? (Kelly Brownell, Yale)

Middletown, RI



So, what seems to matter?

1. Destinations within walk, bike, & transit distance?
2. Sidewalks, trails, bike lanes, safe crossings?
3. Inviting settings & sites for bikes, peds, transit?
4. Safe & accessible for all ages, incomes, abilities?

www.thecommunityguide.org

CDC Guide to Community Preventive Services



mark.fenton@verizon.net

Or in Planner-Speak:

- Land use mix.
- Network of ped, bike, & transit facilities.
- Functional site design & details.
- Safety & universal access.



La Crosse, WI



Denver, CO

1. Land use.



Compact neighborhoods
& shared open space.



Varied destinations in proximity.



E.g. post office,
grocery, schools

Mixed
use,
multi-
family.

Housing
above,
retail
below.



mark.fenton@verizon.net

2. Network encourages active travel with:



E.g., Kingsport, TN Greenway

- Presence of sidewalks, pathways, bike lanes.
- Shorter blocks, cul-de-sac cut-throughs, more intersections.
- Access to trail, park, greenway; quality, reliable *transit*.



3. Site design:



Which setting is more appealing for travel on foot and by bike?

Site design?

Research & practice suggest:



- Pedestrian friendly access; buildings are near the sidewalk, not set back.
- Trees, benches, water, aesthetics, lighting, scale.
- Details: bike parking, open space, plantings, materials.



4. Safety.

- Engineering can dramatically improve safety.
- Increasing pedestrian and bike trips *decreases* overall accident & fatality rates.



Median islands



Roundabout (Neenah, WI)



Curb extensions

(Jacobsen P, *Injury Prevention*, 2003; 9:205-209.)

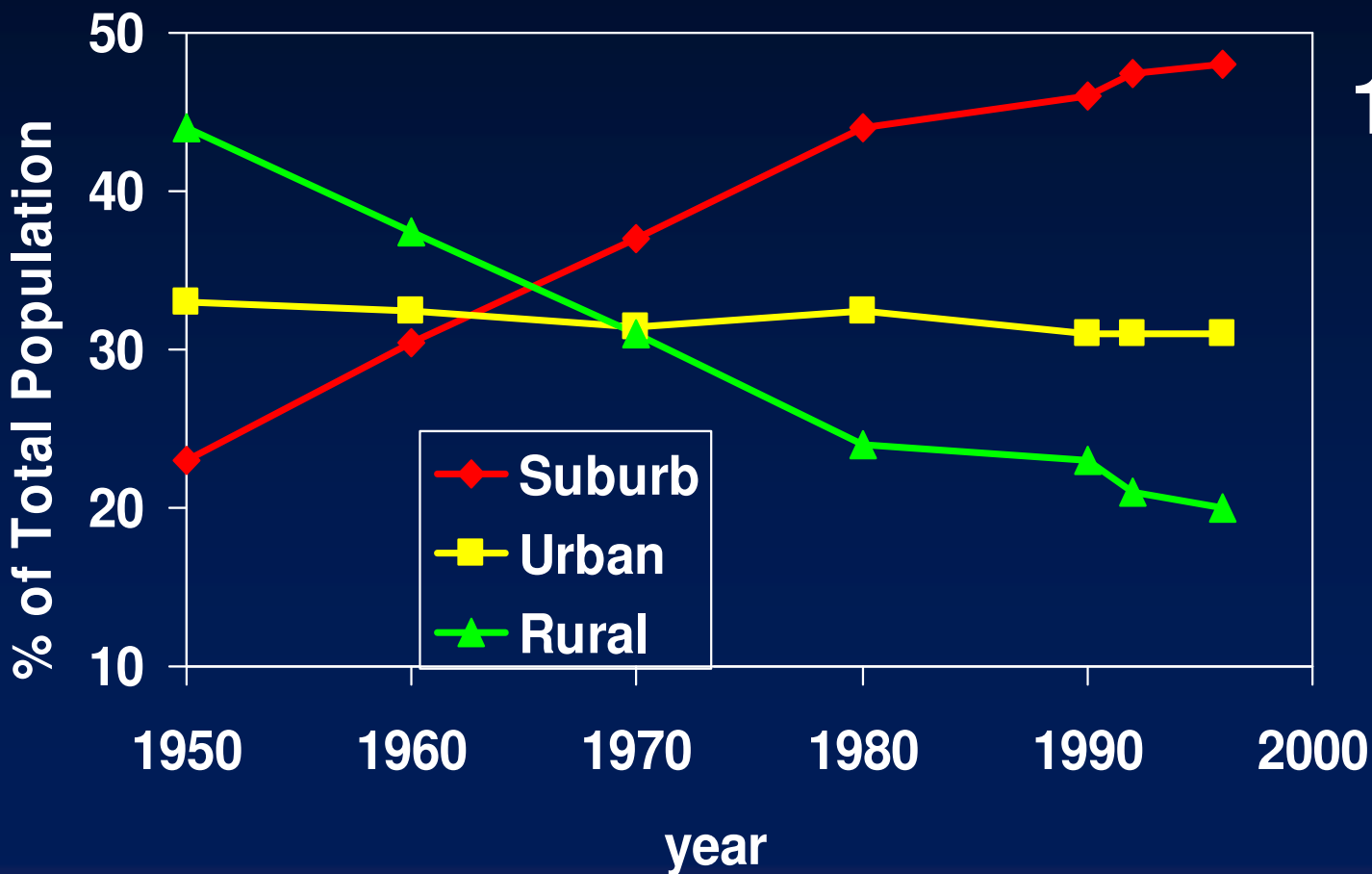
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“But what about rural areas . . . ?”

Suburbanization of America

US population shift, 1950-1996

(after *Bowling Alone*, R. Putnam, 2000)



1. Suburbia is steadily consuming the landscape . . .

2. Rural areas are
where we can
affect the shape of
development
before it's done!

“Rural” housing . . .



mark.fenton@verizon.net

Community design & nutrition?

Community gardens (near schools, parks, senior housing); conserving farmlands; Community Supported Agriculture.



Regulate fast food, drive-through locations.

Farmer's markets,
green grocers



mark.fenton@verizon.net

Recommendation 4:
Both the **built and social**
environments of the
community matter, so work
on improving them. Start by
helping people realize what
“sticks” and what doesn’t.

All the “health” benefits:

Environmental

- Reduced traffic; air, water, & noise pollution.
- Conserved open space, agricultural land.



Safety

- Kids, elderly mobility.
- Crime deterrent.



Education

- Increased safety.
- Reduced transportation costs and infrastructure.
- More community engagement; schools as neighborhood centers.

Social

- Equitable transportation.
- More personal connections.

Economic:

- Residents shop locally; more stable tax base.
- Healthy employees, low turnover, happy employers.
- Healthy housing values (NAHB & NAR surveys).



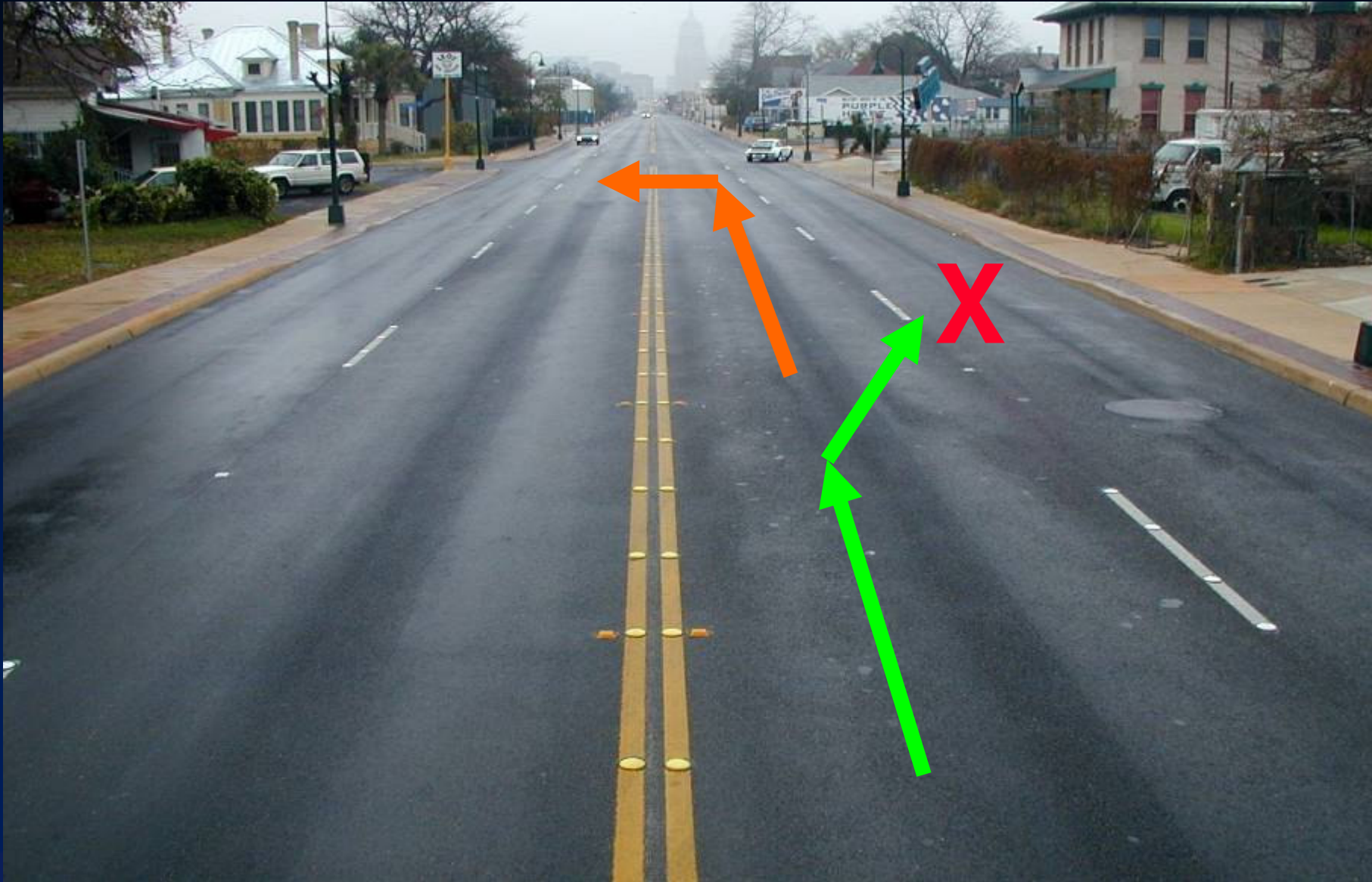
Marshaltown, IA



Or more simply:
< Which generates more tax revenue in the *long run*? ^

1. Highway Design Manual:

Affects the **built environment** for years to come.







**Same street,
different
character.**



Brannock St., Denver

The Story of “4”:

4,000

Approximate number of
annual pedestrian deaths in
America.

40,000

**Approximate total annual
deaths in motor vehicle
crashes.**

400,000*

**Approximate annual deaths due to
sedentary living and poor nutrition.**

***Rounded up from corrected 365,000.**

Mokdad, A.H., et al. 2004. Actual causes of death in the US. JAMA 291: 1238-45.

40,000,000,000

\$40,000,000,000

Approximate direct annual medical expenditures due to inactivity & poor nutrition, borne by taxpayers.

www.cdc.gov/nccdphp/dnpa/

(*Obesity Research, Finkelstein et.al., Jan, '04*)

So my choices:

- 1. Highway Design Manual, Governor's Task Force.**
- 2. Local planning board meeting.**
- 3. America on the Move – national meeting.**
- 4. Nordic Walking (w/poles) DVD.**

Don't bother: Community Health Fair.

So, how do we get there?



mark.fenton@verizon.net

It takes leadership to use 3 Ps & create healthy community designs:

- **Programs:** Educate & build awareness, encourage behavior change.
- **Projects:** Create “stickier” settings & environments for routine activity.
- **Policies:** Rewrite the rules so active designs are the norm & people are rewarded for making the active choice!

7 more lessons from the field.

5. **Evaluate** early.
6. **Build toward policy change:** Institutionalize so *stickier* environments & practices result.
7. **Stealth** rather than bulk.
8. **Focus:** Fewer rather than more goals.
9. It's not about **money**; it's about the **job**.
10. Get some **heavy breathers** in the mix.
11. The **wild future** of physical activity promotion.

5. Community Health Assessment 'N' Group Evaluation (CHANGE)

Based on your team's knowledge or observations of the institution, use the following scale to indicate the most appropriate response.

Response #	Policy	Environment
1	Not identified as problem	Elements not in place
2	Problem identification/gaining agenda status	Few elements in place and/or well developed
3	Policy formulation and adoption	Some elements are in place and/or well developed
4	Policy implementation	Most elements are in place and/or well developed
5	Policy evaluation, adjustment and/or termination	All elements in place and well developed

<i>To what extent does the community:</i>	Res. #
1. Adopt a land use plan?	
2. Maintain a network of walking routes ?	
3. Maintain a network of biking routes ?	
4. Maintain a network of parks ?	
5. Require sidewalks to be built for all developments (e.g., housing, schools, commercial)?	
6. Require bike lanes to be built for all developments (e.g., housing, schools, commercial)?	
7. Provide access to parks, <u>shared-use paths</u> , or open spaces within <u>reasonable walking distance</u> of most homes?	
8. Institute <u>mixed land use</u> ?	
9. Require sidewalks to be in compliance with <u>Americans with Disabilities Act</u> (ADA) requirements (all routes accessible for people with disabilities)?	

10. Provide access to recreation facilities for **people of all abilities**?

11. Enhance access to **public transportation** (e.g., bus stops or transit stations) within reasonable walking distance?

12. Institute street **traffic calming measures** (e.g., road narrowing, central islands, roundabouts, speed bumps) to make areas (e.g., neighborhoods, major intersections) where people are or could be physically active (e.g. walk, bike) safer?

13. Adopt strategies (e.g., neighborhood crime watch, lights) to enhance **personal safety** in areas (e.g., playgrounds, parks, bike lanes, walking paths, neighborhoods) where people are or could be physically active (e.g., walk, bike)?

COLUMN TOTAL: 0

PHYSICAL ACTIVITY SCORE:

E.g. Community-wide Safe Routes to School programs.

- Comprehensive local plans.
- **Educate** on safe behavior.
- **Encourage** walking, cycling.
- **Engineer** preferred routes- sidewalks, trails, crossings.
- **Enforce** proper speeds, etc.
- **Evaluate** where kids come from, what mode, & why.



www.saferoutesinfo.org

mark.fenton@verizon.net

Start by measuring what we want to change:

Schools reporting on youth BMI to parents, administrators?

Instead, why not measure & report travel mode share at every elementary school in America with a national show-of-hands survey?

Mode	%
Driven	21.5
Bus	18.7
Taxi	1.4
Walk	48.3
Cycle	2.8
Scooter	0.7
Park & walk	6.1
Other	0.5

**Scottish 2008
Hands-Up Survey**
www.activetravel.org.uk

6. Successful communities build toward policy change!

- **Programs:** Build awareness, support, skills, & encourage behavior change.
- **Projects:** Alter & improve the built environment for walking, cycling, and active living in general.
- **Policies:** Rewrite the rules so *stickier* environments & practices are the norm!

Programs:

Media; walk & bike to work, shop, & school events, programs.



Safe Routes to School
www.saferoutesinfo.org



Bike sharing programs;
Louisville,
Washington,
Denver . . .
(*Planning,*
May 2008)



Active-
commute
incentives;
E.g., tax free
transit pass,
health benefit
discount.

mark.fenton@verizon.net

Projects

Parks & rec:
Open space,
rec. facilities,
greenways &
trails.



Schools: Space
for PE, bike
racks, access.



Work sites:
Bike parking,
lockers, showers;
walking paths,
open stairs.



Municipalities: Traffic calming, mixed
use, sidewalks, improved crossings.

mark.fenton@verizon.net

Not all “projects” are costly . . .





**School siting,
district lines,
bus policies.**



Policies:

**Roadway & sidewalk
standards, maintenance.**

www.completestreets.org

**Zoning: Mixed use, open
space, impact mitigation;
[inclusionary codes.](#)**



**Site
standards:
Setbacks,
parking,
access,
trails.**



mark.fenton@verizon.net

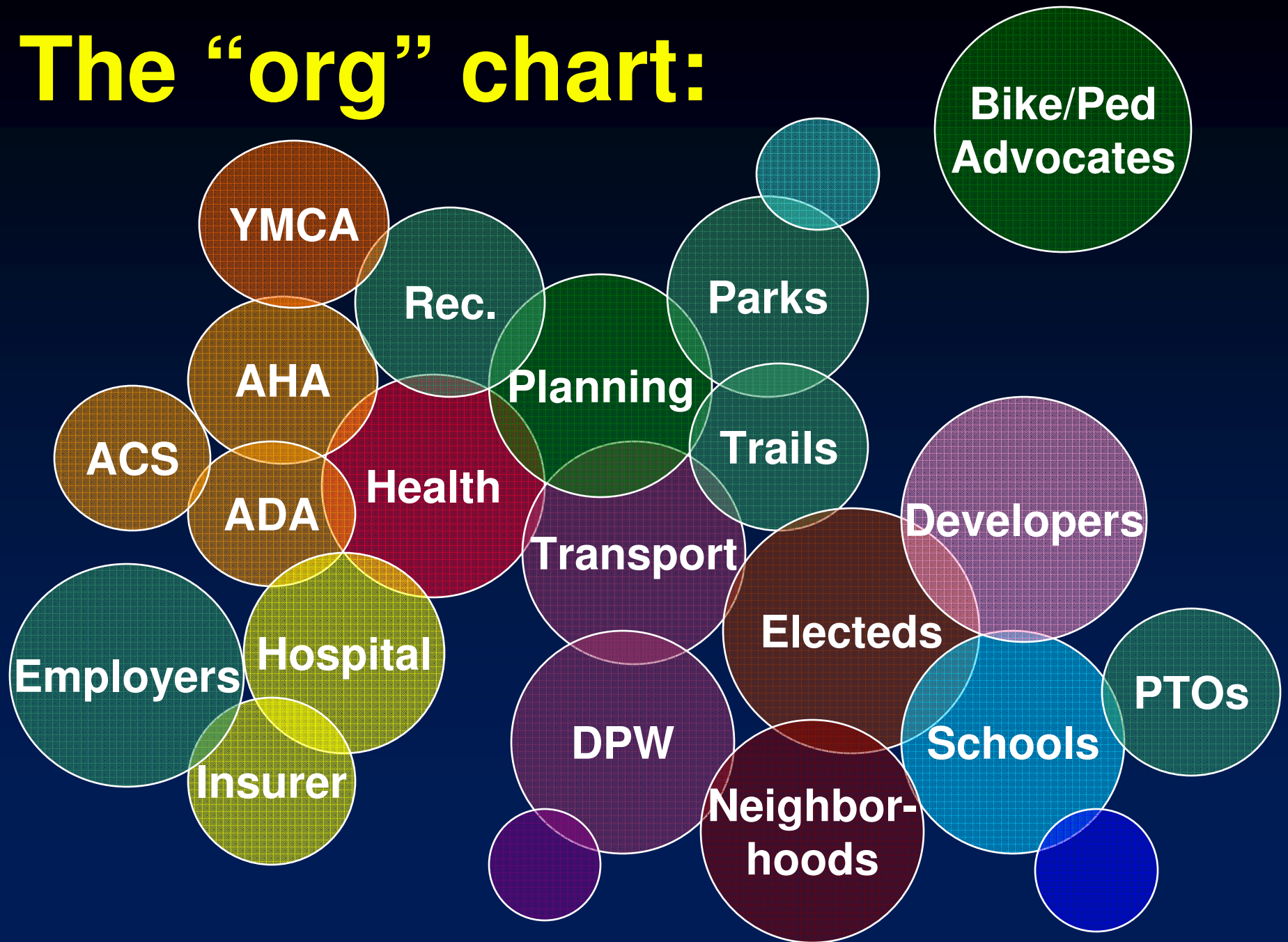
7. This means a potentially huge list of *implementation* partners:

- Schools
- Planning & Zoning
- Engineering, DPW
- Parks & recreation
- Historical Society
- Public Health & Safety
- Chamber of Commerce
- Economic Development, employers
- Neighborhood Assoc., church & service groups
- Environment, Conservation

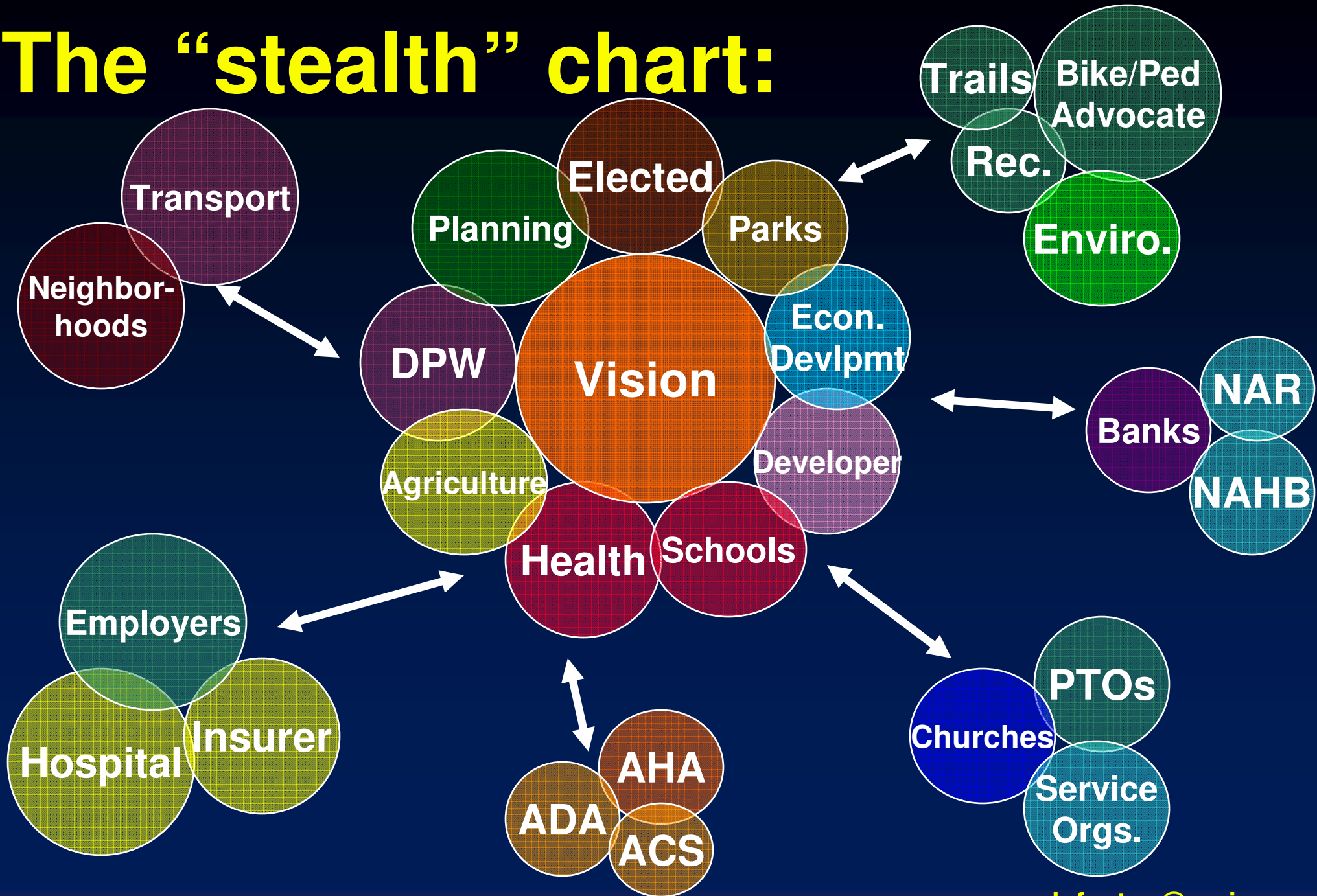


Policy information:
www.lgc.org
www.vtpi.org

The “org” chart:

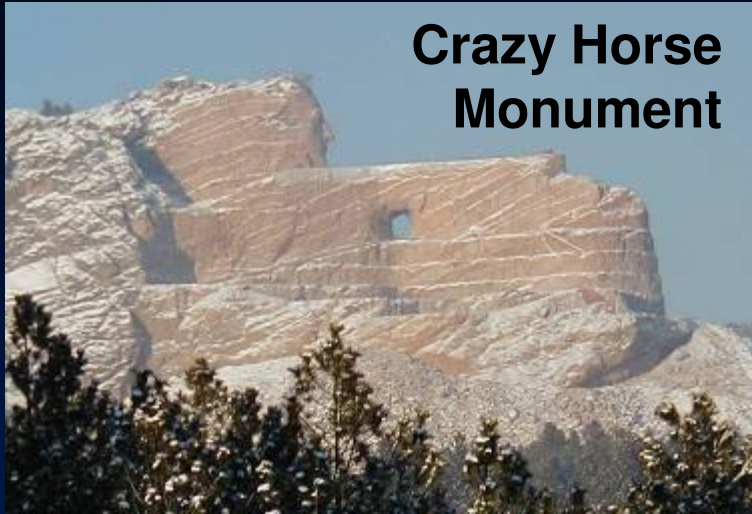


The “stealth” chart:



8. Focus on fewer high impact activities.

What's Rapid City SD famous for?



Crazy Horse Monument



Mt. Rushmore

City of Presidents



Stupendous
hosts to Mark
& Max!

mark.fenton@verizon.net

**Coldest Walk Audit in
my experience (-14°).**



Rapid Creek Tr.

**New count-
down timers >**



**No more waivers by City Council
for sidewalks in subdivisions!**

Longmont, CO

Walk or Wheel
(WOW) to
school week.

Engineering,
planning, &
zoning walk
audit.



City Council testimony on
key transportation issues.

9. It's not about the money, it's about the job!

For sustained intervention,
focus on:

- Routine accommodation.
- Opportunistic improvements.
- Impact mitigation (private sector).
- Special project funding (Transportation Enhancements, Safe Routes to School, Congestion Mitigation & Air Quality, etc).



Ashland, KY

E.g. Complete Streets Policy:



1. Accommodate all users--peds, bicyclists, transit, motor vehicles--of all ages & abilities whenever we touch a road.
2. Roadway design = posted speed.
3. Go beyond local, collector, arterial hierarchy (include trails & alleys to boulevards & parkways).



www.completestreets.org

mark.fenton@verizon.net

10. If you could *strongly influence* one of the following groups, which would you pick?

- 200 advocates, concerned citizens . . .
- 20 engineers, planners, health promoters . . .
- 2 big-time land developers . . .

10. Recruit some Heavy Breathers

- Land developers
- Real estate
- Home builders
- Venture capitalists
- Lenders
- Etc. . . .



Lexington KY



**Area tour w/
developers,
planners,
elected
officials.**



mark.fenton@verizon.net

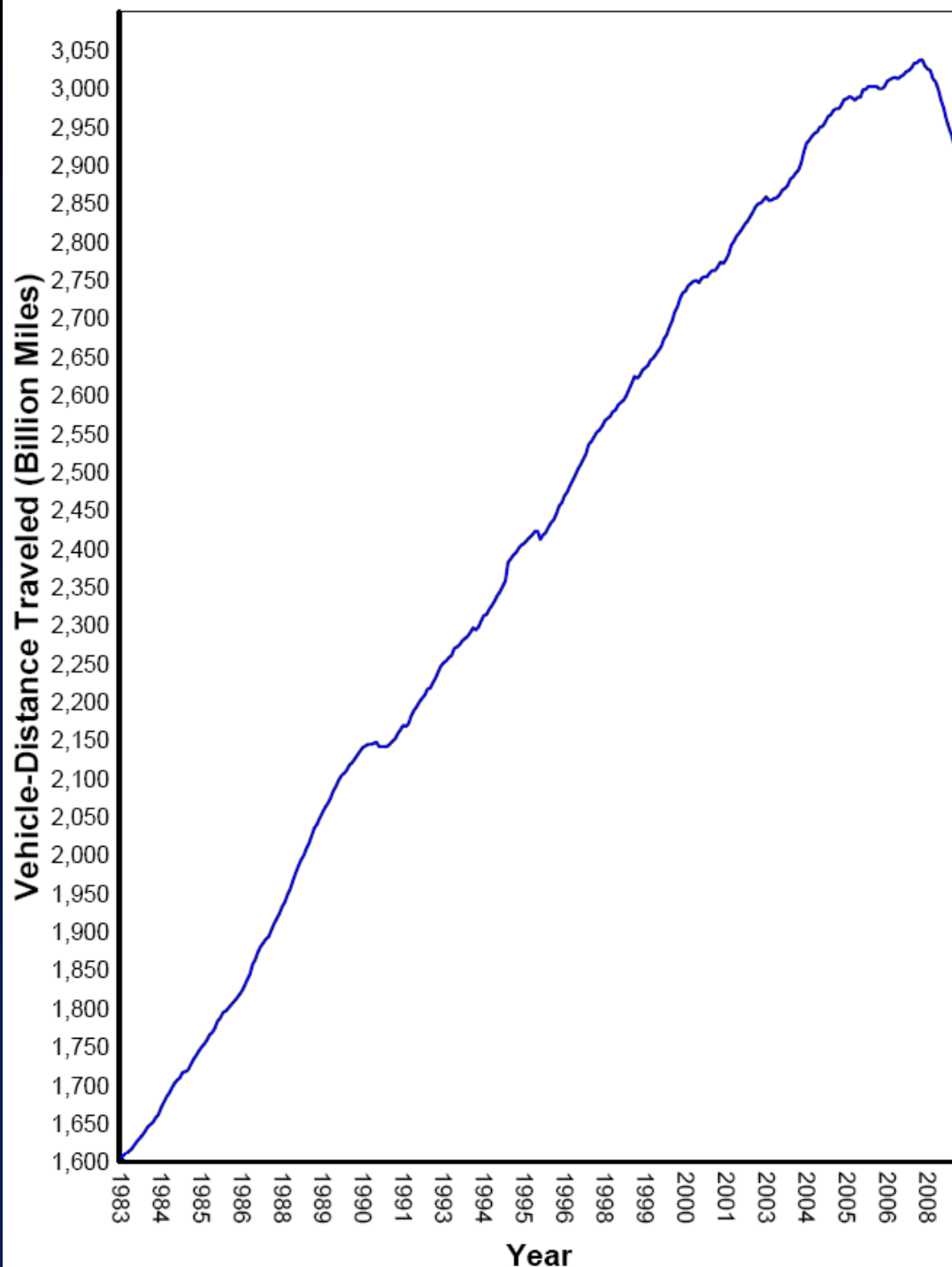
**Sponsored
meeting at
Chamber of
Commerce.**

11. The wild future of activity promotion.

- **Economic stimulus \$.** Which infrastructure?
- **Transit funding.** Rail, bus, van & car pool.
- **Congestion charges.** Auto disincentive.
- **Tolls, parking, gas taxes?** Carrot & stick.
- **Insurance rewards** for active commuting.



- **3rd quarter 2008.**
Auto miles ↓ 4.6%
Transit use ↑ 6.5%
www.apta.org



US Total Vehicle Miles Traveled (VMT); moving 12-month total, by year

2007-2008

VMT: - 3.6%

Transit use: + 4%

www.fhwa.dot.gov
www.apta.com

mark.fenton@verizon.net

Questions:

1. Is it just an *obesity* epidemic?
2. Who's on your stealth team? (Who's missing?)
3. Are you attacking stickiness? (*E.g. land use, network, site design, safety.*)
4. What are the small number of meaningful *policies* on which you are going to focus?
5. Any heavy breathers in the fold?
6. Whose jobs are *institutionalizing* change?
7. What's your visionary, futuristic effort?
(B.H.A.G.)

Six folks to take out to lunch:

- 1. Planner and/or planning commissioner.**
- 2. Transportation or public works engineer.**
- 3. City councilor, county commissioner.**
- 4. School superintendent, board president.**
- 5. Largest employer, chamber president.**
- 6. Private developer, realtor, lender.**

Don't ask them to help you, ask how you can help them meet *common goals*.

Five web sites to go to:

1. www.saferoutesinfo.org
2. www.completestreets.org
3. www.activelivingresearch.org
4. www.T4america.org
5. www.physicalactivityplan.org

mark.fenton@verizon.net

Why care about stickiness & active community design?

- The **inactivity** epidemic; **our kids may pay!**
- **~4,000** pedestrian, **~40,000** motor vehicle, **~400,000** sedentary-related deaths/year.
- **Smog alerts**, over an hour of average commute time/day, traffic congestion and costs.
- OPEC; drilling in **ANWR**; **oil wars** in Mid-east.
- More eyes on the street, **less crime**.
- Shopping locally, healthier **housing values**.
- Higher employee retention, higher productivity, **lower health care costs**.

This guy
is a new
model of
success!



